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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/484,316	01/18/2000	Goro Asahi	5000-4723	9561
27123	7590	07/28/2005	EXAMINER	
MORGAN & FINNEGAN, L.L.P. 3 WORLD FINANCIAL CENTER NEW YORK, NY 10281-2101			SENF, BEHROOZ M	
			ART UNIT	PAPER NUMBER
			2613	

DATE MAILED: 07/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/484,316

Applicant(s)

ASAHI ET AL.

Examiner

Behrooz Senfi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 4/29/2005, fwd 5/15/2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

1. Applicant amendment (filed, 4/29/2005) by providing terminal disclaimer over comes the double patenting rejection.

Claims 1 – 3, 8, 10, 13 – 17 and 19 are amended and new claims 20 – 21 are added.

Applicant's argument with respect to claims 1 - 21 have been considered but are moot in view of the new application of the Shimizu et al (US 6,275,754).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 - 18 and 20 – 21, are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimizu et al (US 6,275,754).

Regarding claim 1, Shimizu '754 teaches "an apparatus for aiding steering when a vehicle is being driven in reverse" (i.e. figs. 1 and 3a – 3c) and "a camera for capturing an image of an area behind the vehicle" (i.e. fig. 1, television cameras S6) and "a monitor for displaying the image captured by the camera" (i.e. fig. 1, stage display unit 11), and "a detector for detecting the angle of the steered wheels" (aiding the steering wheels of the vehicle, would necessitate the detection of the angle, fig. 7), and "a display control unit for displaying a guide marking for aiding steering, the marking and the image being simultaneously displayed on the monitor when the vehicle is being

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driven in reverse, wherein the marking provides a driver with at least first and second indications, wherein the first indication is a fixed reference guide displaying vehicle Width projecting behind the vehicle and showing a path of the vehicle corresponding to the angle of zero degrees of the steered wheels" (fig. 3, shows the path of the vehicle on the display and the angle zero would be the angle of the steered wheels in initial position, also figs. 12 and 16, shows that the width of the vehicle "B" being considered) and "the second indication shows a prospective path of the vehicle corresponding to the current angle of the steered wheels detected by the detector" (i.e. fig. 1 shows the controller 22 "which receives signals from the steering angles detection and detecting angles of the wheels S1, S3" controls the aiding steering and the operation stage display 11, and figs. 3a – 3c, 4 and 10, col. 5, lines 65 – col. 6, lines 15, shows the first and second indication and prospective path of the vehicle corresponding to the angle of the steered wheels on the display), and "a reference guide displaying vehicle width projecting behind the vehicle" read on (i.e. figs. 5 and 12) since fig5 shows backward movement of the vehicle and the parking space on the display, and (fig. 6C) the dashed lines could be consider as reference guide for backward parking with consideration of the width of the vehicle (fig. 16). Therefore the claimed limitation considered as an obvious variation of the reference patent.

Regarding claim 2, the limitations claimed are substantially similar to claim 1, and are covered with respect to claim 1.

Regarding claims 3 - 9, Shimizu '754 teaches, "a pair of side marks that extends behind the rear end of the vehicle along the prospective path and are spaced apart from

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each other by the width of the vehicle” reads on (i.e. figs. 3 and 6c, showing the vehicle path by dot lines, which are spaced apart by the vehicle width), and “second indication of the marking includes an end mark that approximately indicates the width of the vehicle in claims 4 - 5” are covered in claim 1, and “intermediate mark extending between the side marks, in claim 6” reads on the marking path, shown in figs. 3 and 6b – 6c), and “wherein the predetermined distance appears to be approximately the same as the wheel base of the vehicle, in claim 7” would read on (fig. 3, where shows the parking spot and the vehicle path for parking purpose).

Regarding claims 8 – 9, Shimizu calculates the prospective path of the movement of the vehicle based on the positional relationship and display prospective path of the vehicle movement on the display. Shimizu does not particularly show, “calculating the prospective path using polar coordinates and the end mark of the second indication of the marking is determined by a radial line extending from the polar coordinates, in claim 8 and prospective path is circular, in claim 9”. Examiner takes Official Notice for the above feature. Calculating a prospective path Using a polar coordinates are known and used in the conventional art, for non-linear dynamics and in 3-D environment.

Regarding claim 10 - 12, Shimizu ‘754 teaches, “display control unit displaces the indication of the prospective path in the direction of vehicle movement” (i.e. figs. 3a – 3b), and “determining the steering speed, in claims 11 and 12” is inherent function and necessitated by the process of vehicle automatic steering of Shimizu.

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Regarding claim 13, Shimizu '754 does not mention, "guide marking is displayed in color". Displaying guide marking on the display in different color are well known and used in the conventional art. In other words "display the guide marking in different color" is like "color coding", which is used for ease of identification and tracking purpose, and is well known and used. The examiner takes Official Notice for the above feature.

Regarding claims 14 - 17, the limitations claimed are substantially similar to claim 1; therefore the grounds for rejecting claim 1 also apply here. And as for "marker", (fig. 10, P or R or Q, are being displayed on the display and are for aiding the vehicle for parking purpose, which consider as marker", Furthermore, for additional limitation parallel parking and keeping the steered wheels turned at their maximum angle (i.e. figs. 3, 14 and 18, and the graph on the bottom of fig. 7, shows the traveling distance relative to the steering angle of the wheel, for reverse parking right and left, the steered wheels with respect to the distance, thus being controlled by the controller 22), and "first marker and the second marker are selectively displayed depending on the parking position, in claim 17" reads on (i.e. fig. 1, bottom of the page shows the selection of four step of the parking).

Regarding claims 18, 20 and 21, Shimizu '754 discloses "detection of obstacle existent and displaying " (i.e. figs 4 – 5, col. 1, lines 27+), and "correcting means, in claim 20 to correct prospective path in claim 21" (i.e. col. 2, lines 64 – 65).

4. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over in Shimizu '754 in view of Franke et al. (US 5,485,378).

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Regarding claim 19, the limitations as claimed are substantially similar to claim 1 and are covered in claim 1 above. Although, Shimizu '754 fails to explicitly show the additional limitation "guide display is positioned at the center of the route and the route being an image of a way behind the vehicle". However, such features are well known and used as evidenced by Franke '378 (fig. 2, col. 2, lines 11+) where teaches steering and control the course of a vehicle with respect to lane boundary (center strip). Since Shimizu '754 uses the same cameras in the back and around/side of the vehicle and control section for controlling the position of the vehicle in reverse course (e.g. with video cameras) and on the basis of this data control the steering of the vehicle.

Therefore, taking the combined teaching of Shimizu '754 and Franke '378 as a whole, it would have been obvious to modify the steering system of Shimizu '754 as taught by Franke '378 for maintaining a controlled course (distance) with respect to the center strip of the route behind the vehicle.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Behrooz Senfi** whose telephone number is **(571) 272-7339**

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Mehrdad Dastouri** can be reached on **(571) 272-7418**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Or faxed to:


(703) 872-9314

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relative to the status of the application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

B. M. S.

7/24/05



RICHARD LEE
PRIMARY EXAMINER